CLAIMS

1. An integrated-circuit (IC) radio-frequency amplifier having normal and attenuation modes, the amplifier comprising:

a low noise amplifier (LNA) having an input line, a normal output line, a bypass output line and an attenuation control input line; and

a differential switched gain amplifier (DSGA) connected downstream of the LNA and including means for selecting between inputs from the normal output line and the bypass output line from the LNA;

wherein a control signal on the attenuation control input line permits switching the LNA between a normal mode of operation in which signals on the input line are amplified in the LNA and then passed to the DSGA, and a bypass mode of operation in which signals on the input line are attenuated and passed directly to the DSGA.

2. An amplifier as defined in claim 1, and further comprising:

signal transforming means for converting single-ended signals on the normal output line and the bypass output line to differential signals for input to the DSGA.

3. An amplifier as defined in claim 2, wherein the signal transforming means comprises first signal transforming means for converting the signals on the normal output line and second signal transforming means for converting the signals on the bypass output line.

4. An amplifier as defined in claim 3, wherein the first signal transforming means is not integrated with the other components of the amplifier.

5. An amplifier as defined in claim 3, wherein:

the DSGA further comprises first and second input buffers for processing signals on the normal output line and the bypass output line, respectively; and

the second signal transforming means is integrated into the second input buffer.

6. An amplifier as defined in claim 1, wherein the LNA further comprises:

a mode switching transistor connected in series with a resistor between the input line and a ground line, wherein the attenuation control input line is connected to control the state of the mode switching transistor, which is arranged to permit normal operation of the amplifier in a normal mode, but to disable normal operation of the amplifier in an

attenuation mode; and

a voltage divider providing an attenuated portion of a signal on the input line to the bypass output line;

and wherein the means for selecting between inputs to the DSGA is controlled by the attenuation control signal, to provide for connection of the bypass output line to the DSGA input when the attenuation mode is selected.